

CLEAN VERSION OF PENDING CLAIMS

CHIP PACKAGE WITH DEGASSING HOLES
Applicant: Dustin P. Wood
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30. (Amended) An integrated circuit package comprising:

a first conductive layer having a first grid of holes disposed relative to a first coordinate system;

a second conductive layer parallel to the first conductive layer, the second conductive layer having a second grid of holes offset from the first grid of holes and disposed relative to the first coordinate system;

a dielectric layer between the first and second conductive layers; and

at least one conductive signal trace disposed within the dielectric layer, the at least one conductive signal trace disposed parallel to an axis of a second coordinate system that is rotated with respect to the first coordinate system by an angle of between zero and forty-five degrees.

- 35. (Amended) The integrated circuit package of claim 34 wherein the at least one conductive signal trace includes at least one segment rotated substantially 22.5 degrees relative to the first coordinate system.
- 37. (Amended) The integrated circuit package of claim 30 wherein the first grid of holes includes holes spaced with non-equal pitch in an x direction and in a y direction relative to the first coordinate system.
- 39. An integrated circuit package comprising:

a core having first and second sides; and

built-up layers on the first side of the core, the built-up layers including first and second conductive layers with non-aligned grids of degassing holes.

- 40. The integrated circuit package of claim 39 further comprising a signal layer between the first and second conductive layers, the signal layer including at least one signal trace with segments rotated relative to the grids of degassing holes.
- 41. The integrated circuit package of claim 39 further comprising built-up layers on the second side of the core, the built-up layers on the second side of the core including third and fourth conductive layers with non-aligned grids of degassing holes.
- 42. The integrated circuit package of claim 39 wherein:

the first conductive layer includes a first grid of degassing holes arranged in an x direction and a y direction; and

the second conductive layer includes a grid of degassing holes offset from the first grid of degassing holes in at least one of the x direction and the y direction.

43. The integrated circuit package of claim 39 wherein:

the first conductive layer includes a first grid of degassing holes arranged in an x direction and a y direction; and

the second conductive layer includes a grid of degassing holes offset from the first grid of degassing holes in both the x direction and the y direction.

- 44. The integrated circuit package of claim 43 further comprising:
- a signal layer between the first and second conductive layers, the signal layer including at least one trace segment rotated substantially 22.5 degrees relative to the x direction.
- 45. The integrated circuit package of claim 44 further comprising built-up layers on the second side of the core, the built-up layers on the second side of the core including third and fourth conductive layers with non-aligned grids of degassing holes.

46. The integrated circuit package of claim 45 wherein:

the third conductive layer includes a first grid of degassing holes arranged in the x direction and the y direction; and

the fourth conductive layer includes a grid of degassing holes offset from the third grid of degassing holes in both the x direction and the y direction.

47. The integrated circuit package of claim 46 further comprising:

a signal layer between the third and fourth conductive layers, the signal layer including at least one trace segment rotated substantially 22.5 degrees relative to the x direction.